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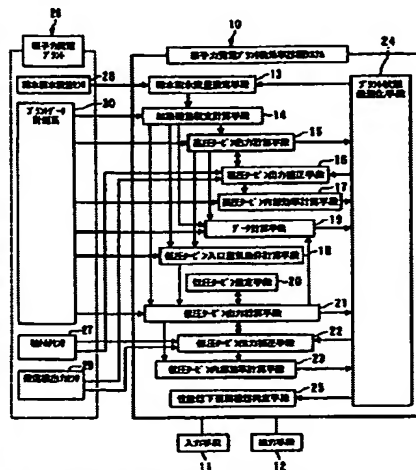
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(54) Title: THERMAL EFFICIENCY DIAGNOSING SYSTEM FOR NUCLEAR POWER PLANT, THERMAL EFFICIENCY
DIAGNOSING PROGRAM FOR NUCLEAR POWER PLANT, AND THERMAL EFFICIENCY DIAGNOSING METHOD FOR
NUCLEAR POWER PLANT(54) 発明の名称: 原子力発電プラント熱効率診断システム、原子力発電プラント熱効率診断プログラムおよび原子
力発電プラント熱効率診断方法

- 26... NUCLEAR POWER PLANT
28... FEEDWATER/CONDENSED WATER FLOW SENSOR
30... PLANT DATA MEASURING SYSTEM
27... SHAFT TORQUE SENSOR
29... GENERATOR OUTPUT SENSOR
10... THERMAL EFFICIENCY DIAGNOSING SYSTEM FOR NUCLEAR POWER PLANT
13... FEEDWATER/CONDENSED WATER FLOW SETTING MEANS
14... HEATER HEAT BALANCE CALCULATION MEANS
15... HIGH-PRESSURE TURBINE OUTPUT CALCULATION MEANS
16... HIGH-PRESSURE TURBINE OUTPUT CORRECTION MEANS
17... HIGH-PRESSURE TURBINE INTERNAL EFFICIENCY CALCULATION MEANS
18... DATA CALCULATION MEANS
19... LOW-PRESSURE TURBINE INLET STEAM CONDITION SETTING MEANS
20... LOW-PRESSURE TURBINE SETTING MEANS
21... LOW-PRESSURE TURBINE OUTPUT CALCULATION MEANS
22... LOW-PRESSURE TURBINE OUTPUT CORRECTION MEANS
23... LOW-PRESSURE TURBINE INTERNAL EFFICIENCY CALCULATION MEANS
25... DEGRADATION ORIGINATING DEVICE SPECIFYING MEANS
11... INPUT MEANS
12... OUTPUT MEANS
24... PLANT STATE OPTIMIZATION MEANS

(57) Abstract: A thermal efficiency diagnosing system (10) for a nuclear power plant, comprising a feedwater/condensed water flow setting means (13) temporarily setting a feedwater flow, a heater heat balance calculation means (14) calculating the heat exchange amounts of feedwater and condensed water in a heater, a high-pressure turbine output calculation means (15) for obtaining the calculated output value of a high-pressure turbine by assuming the degree of dryness of the nuclear power plant at the outlet of the high-pressure turbine, a high-pressure turbine output correction means (16) correcting the calculated output value of the high-pressure turbine by correcting the degree of dryness of the nuclear power plant at the outlet of the high-pressure turbine, a high-pressure turbine internal efficiency calculation means (17) calculating the internal efficiency of the high-pressure turbine, a low-pressure turbine inlet steam condition setting means (18) setting steam conditions at the inlet of a low-pressure turbine, a low-pressure turbine output calculation means (21) for obtaining the calculated output value of the low-pressure turbine, a low-pressure turbine output correction means (22) correcting the calculated output value of the low-pressure turbine, a low-pressure turbine internal efficiency calculation means (23) calculating the internal efficiency of the low-pressure turbine, and a degradation originating device specifying means (25) specifying a component causing the degradation of the nuclear power plant.

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